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I claim:

1. A thermoplastic molding process comprising the steps of:
 - a) selecting a thermoplastic material;
 - b) extrusion of a thermoplastic material through a die having adjustable die gate means to produce a slab of adjustable thickness of the extruded material;
 - c) adjusting the thermoplastic material to a desired thickness by varying the thickness of the extruded material therethrough in different parts of the slab;
 - d) heating a thermoplastic material to a desired temperature;
 - e) extruding a slab of said thermoplastic material through said selected thermoplastic extrusion die;
 - f) trimming said extruded thermoplastic material to a variable thickness to a predetermined thickness;
 - g) placing said trimmed slab of thermoplastic material into a thermoforming mold;
 - h) molding a predetermined thermoplastic part in said mold, whereby a molded part is produced having a desired thickness from a slab of thermoplastic material extrusion of the material.

1 2. A thermoplastic molding process in accordance
2 with claim 1 including the step of moving said
3 thermoforming mold having a molded part therein while
4 said mold is cooling.

1 3. A thermoplastic molding process in accordance
2 with claim 2 including the step of moving a second
3 thermoforming mold in position for receiving the next
4 trimmed thermoplastic slab.

1 4. A thermoplastic molding process in accordance
2 with claim 3 including the step of rotating ^{a plurality of}
3 thermoplastic molds on a table to position one mold at
4 a time in a position to receive the next trimmed
5 thermoplastic slab.

1 5. A thermoplastic molding process in accordance
2 with claim 4 in which the step of selecting an
3 extrusion die includes selecting a die having a
4 plurality of gate plates therein placed adjacent to
5 each other and separately adjustable to thereby vary
6 the thickness across the thermoplastic material being
7 extruded thereby.

1 6. A thermoplastic molding process in accordance
2 with claim 5 in which the step of selecting a die
3 includes selecting a die in which each of said
4 plurality of ^{gates} ~~gate plates~~ is attached to ^a motor allowing
5 ~~the~~ ^{said gate} ~~each plate~~ to be moved remotely to vary the
6 position of each ^{gate} ~~plate~~ separately.

1 7. A thermoplastic molding process in accordance
2 with claim 6 in which each said motor is an electric
3 stepper motor.

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1 8. A thermoplastic molding system comprising:
2 a thermoplastic extrusion die for the extrusion
3 of a thermoplastic slab, said extrusion die having
4 adjustable die gate members for varying the thickness
5 of the extruded material in different parts of the
6 extruded slab;
7 a trimmer for cutting said extruded thermoplastic
8 slab from said thermoplastic extrusion die;
9 a plurality of thermoplastic molds, each mold
10 being mounted on a movable platform for moving one
11 mold at a time in a position to receive a
12 thermoplastic slab being trimmed from said
13 thermoplastic extrusion die, whereby a molded part can
14 be formed with a variable thickness from a heated slab
15 of thermoplastic material being fed still heated from
16 an extrusion die.

1 9. A thermoplastic molding system in accordance
2 with claim 8 in which said plurality of molds moves on
3 said movable platform between a mold loading position
4 and a mold release position.

1 10. A thermoplastic molding system in accordance
2 with claim 9 in which said mold moveable platform is
3 a rotating platform rotating each said thermoplastic
4 mold mounted thereon to position one mold at a time in
5 a position to receive the next trimmed thermoplastic
6 slab from said extruding die.

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1 11. A thermoplastic molding system in accordance
2 with claim 10 in which said extrusion die plurality
3 of die gate members includes a plurality of extrusion
4 die plates therein positioned adjacent to each other
5 and separately adjustable to thereby vary the
6 thickness across thermoplastic material being extruded
7 from said die.

1 12. A thermoplastic molding system in accordance
2 with claim 11 in which said thermoplastic extrusion
3 die has a plurality of gate plates each having a motor
4 coupled thereto for moving each gate plate separately
5 by remote control.

1 13. A thermoplastic molding system in accordance
2 with claim 12 in which each said motor is an electric
3 stepper motor.

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